

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Previously presented): A method for determining a nucleotide sequence of a single nucleic acid molecule, which comprises:

- (a) immobilizing a nucleic acid molecule onto the surface of a solid;
- (b) annealing a primer to said nucleic acid molecule, wherein said primer has a sequence complementary to a part of a sequence of the nucleic acid molecule;
- (c) providing a solution which contains a DNA polymerase and only one type of dye-labeled dNTP, where N is A, T or U, G or C, or an RNA polymerase and only one type of dye-labeled NTP, where N is A, U, G or C, to said immobilized nucleic acid molecule, and allowing the dye-labeled dNTP or NTP to react with the 3' end of said primer, whereby the dye-labeled dNTP or NTP, which forms a base-pair with a base in the nucleic acid molecule at a position where the dye-labeled dNTP or NTP reacts with the 3' end of said primer and, is bound to the primer by action of the polymerase;
- (d) detecting a bound, dye-labeled dNTP or NTP;
- (e) disrupting the dye molecule of the bound, dye-labeled dNTP or NTP;
- (f) repeating (c) to (e) while changing the type of dye-labeled dNTP or NTP in turn, to sequentially bind dNTPs or NTPs which forms a base-pair with the nucleotides of the nucleic acid molecule; and
- (g) determining a nucleotide sequence of the nucleic acid molecule based on the types of the sequentially bound dNTPs or NTPs.

Claim 2 (Previously presented): The method of Claim 1, wherein said surface of a solid is the inner wall of a capillary.

Claim 3 (Previously presented): The method of Claim 1, wherein (d) comprises optically detecting the dye molecule of said dye-labeled dNTP or NTP.

Claim 4 (Previously presented): The method of Claim 1, wherein (d) comprises exciting dye molecules by irradiation of a laser beam and detecting a fluorescent signal.

Claim 5 (Original): The method of Claim 1, wherein said detection is performed using a confocal fluorescence microscope system.

Claim 6 (Previously presented): The method of Claim 4, wherein said disrupting the dye molecules in (e) comprises irradiating with a laser beam stronger than the laser beam ~~that~~ in (d).

Claim 7 (Original): The method of Claim 1, wherein said dye is a fluorescent dye.

Claim 8 (Original): The method of Claim 1, wherein said dye-labeled dNTP is labeled with rhodamine, tetramethyl rhodamine (fluorescein) Rhodamine 6G, fluorescein isothiocyanate, or 4-fluoro-7-nitro-benzofurazon (Texas Red).

Claim 9 (Original): The method of Claim 1, wherein said dye-labeled NTP is labeled with rhodamine, tetramethyl rhodamine (fluorescein) Rhodamine 6G, fluorescein isothiocyanate, or 4-fluoro-7-nitro-benzofurazon (Texas Red).

Claim 10 (Previously presented): The method of Claim 1, wherein said dNTP or NTP is each labeled with the same dye.

Claim 11 (Original): The method of Claim 1, wherein said solution consists of a droplet in which an aqueous solution containing said dye-labeled dNTP or NTP, is entrapped within a hydrophobic liquid.

Claims 12-22 (Cancelled).

Claims 23-25 (Cancelled).

Claim 26 (Currently amended): A method for determining a nucleotide sequence of a single nucleic acid molecule, which comprises:

- (a) immobilizing a primer onto the surface of a solid, wherein the primer comprises a sequence complementary to a part of a sequence in the nucleic acid molecule;
- (b) annealing a nucleic acid molecule to the immobilized primer;
- (c) providing a solution which contains a DNA polymerase and only one type of dye-labeled dNTP, where N is A, T or U, G or C, or an RNA polymerase and only one type of dye-labeled NTP, where N is A, U, G or C, to said immobilized primer, and allowing the dye-labeled dNTP or NTP to react with the 3' end of said primer, whereby the dye-labeled dNTP or NTP, which forms a base-pair with a base in the nucleic acid molecule at a position where the dye-labeled dNTP or NTP reacts with the 3' end of said primer and is bound to the primer by action of the polymerase;
- (d) detecting a bound, dye-labeled dNTP or NTP;

- (e) disrupting the dye molecule of the bound, dye-labeled dNTP or NTP;
- (f) repeating (c) to (e) while changing the type of dye-labeled dNTP or NTP in turn, to sequentially bind dNTPs or NTPs which forms a base-pair with the nucleotides of the nucleic acid molecule; and
- (g) determining a nucleotide sequence of the nucleic acid molecule based on the types of the sequentially bound dNTPs or NTPs.

Claim 27 (Previously presented): The method of Claim 26, wherein said surface of a solid is the inner wall of a capillary.

Claim 28 (Previously presented): The method of Claim 26, wherein (d) comprises optically detecting the dye molecule of said dye-labeled dNTP or NTP.

Claim 29 (Previously presented): The method of Claim 26, wherein (d) comprises exciting dye molecules by irradiation of a laser beam and detecting a fluorescent signal.

Claim 30 (Previously presented): The method of Claim 26, wherein said detection is performed using a confocal fluorescence microscope system.

Claim 31 (Previously presented): The method of Claim 29, wherein said disrupting the dye molecules in (e)-comprises irradiating with a laser beam stronger than the laser beam in (d).

Claim 32 (Previously presented): The method of Claim 26, wherein said dye is a fluorescent dye.

Claim 33 (Previously presented): The method of Claim 26, wherein said dye-labeled dNTP is labeled with rhodamine, tetramethyl rhodamine (fluorescein) Rhodamine 6G, fluorescein isothiocyanate, or 4-fluoro-7-nitro-benzofurazon (Texas Red).

Claim 34 (Previously presented): The method of Claim 26, wherein said dye-labeled NTP is labeled with rhodamine, tetramethyl rhodamine (fluorescein) Rhodamine 6G, fluorescein isothiocyanate, or 4-fluoro-7-nitro-benzofurazon (Texas Red).

Claim 35 (Previously presented): The method of Claim 26, wherein said dNTP or NTP is each labeled with the same dye.

Claim 36 (Previously presented): The method of Claim 1, wherein said solution consists of a droplet in which an aqueous solution containing said dye-labeled dNTP or NTP, is entrapped within a hydrophobic liquid.